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(71) Applicant:
Lucent Technologies Inc.
Murray Hill, New Jersey 07974-0636 (US)

(72) Inventors:
• Demetrescu, Cristian
Middlesex TW2 5LY (GB)
• Fabri, Simon
Msida (GB)
• Tatesh, Said
Swindon SN2 1BB Wiltshire (GB)

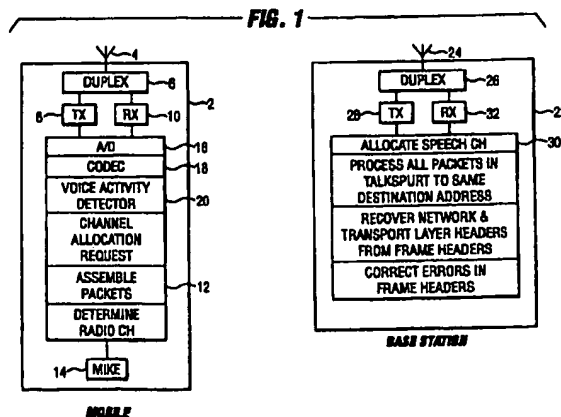
(74) Representative:
Weltzel, David Stanley
Lucent Technologies UK Limited,
5, Mornington Road
Woodford Green, Essex IG8 0TU (GB)

(54) Mobile terminal and base station in a packet radio services network

(57) There is disclosed a mobile terminal for communicating with a base station in a packet radio services network. The terminal has a processor for determining one of a plurality of channels for communication between the mobile terminal and the base station; for digitally coding speech to provide speech information; for assembling speech information into speech packets; and for generating channel allocation requests for a channel in which to send speech packets. A radio transmitter is provided for transmitting the requests and the packets to a base station in the net-

work. A radio receiver receives identities of channels allocated by the base station for the mobile terminal to transmit on. The processor is responsive to each received channel allocation to determine that packets are sent on the allocated channel.

In the GPRS since a channel is released when there is no packet to transmit, higher traffic levels can be obtained using the same number of radio channels.



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EUROPEAN SEARCH REPORT

Application Number
EP 98 30 8584

DOCUMENTS CONSIDERED TO BE RELEVANT			
Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (Int.Cl.7)
X	GB 2 306 858 A (NOKIA MOBILE PHONES LTD) 7 May 1997 (1997-05-07) * page 1, paragraph 3 - page 2, paragraph 1; figures 2-4 * * page 6, line 3-20 * * page 9, line 23 - page 11, line 4 * * page 13, line 13 - page 14, line 15 * * page 15, line 13 - page 17, line 18 *	1,2,11	H04Q7/22
A	---	12,13	
X	US 5 299 198 A (CORRIGAN III JOHN E ET AL) 29 March 1994 (1994-03-29) * figures 12-16,19-21,38-40 * * column 3, line 50 - column 4, line 57 * * column 4, line 1-56 * * column 14, line 55 - column 15, line 32 * * column 26, line 4 - column 27, line 28 *	1,11	
A	SANJIV NANDA: "ANALYSIS OF PACKET RESERVATION MULTIPLE ACCESS: VOICE DATA INTEGRATION FOR WIRELESS NETWORKS" PROCEEDINGS OF THE GLOBAL TELECOMMUNICATIONS CONFERENCE AND EXHIBITION(GLOBECOM),US,NEW YORK, IEEE, vol. -, 2 December 1990 (1990-12-02), pages 1984-1988, XP000218913 ISBN: 0-87942-632-2 * page 1, left-hand column, line 2-6,24,25,31-33,38-40 * * page 3, left-hand column, line 27-32 * * page 4, right-hand column, paragraph 4.1 *	2,3,8	TECHNICAL FIELDS SEARCHED (Int.Cl.7) H04Q H04L
The present search report has been drawn up for all claims			
Place of search THE HAGUE		Date of completion of the search 20 December 2000	Examiner Pacholec, D
CATEGORY OF CITED DOCUMENTS X : particularly relevant if taken alone Y : particularly relevant if combined with another document of the same category A : technological background O : non-written disclosure P : intermediate document T : theory or principle underlying the invention E : earlier patent document, but published on, or after the filing date D : document cited in the application L : document cited for other reasons & : member of the same patent family, corresponding document			

EPO FORM 1503 03.82 (P04C01)



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EUROPEAN SEARCH REPORT

Application Number
EP 98 30 8584

DOCUMENTS CONSIDERED TO BE RELEVANT			
Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (Int.Cl.7)
A	<p>"Digital cellular telecommunications system (phase 2+); General Packet Radio Service (GPRS); Mobile Station (MS) - Servicing GPRS Support Node (SGSN); Subnetwork Dependent Convergence Protocol (SND CP)"</p> <p>July 1998 (1998-07), EUROPEAN TELECOMMUNICATIONS STANDARDS INSTITUTE, VALBONNE - FRANCE XP002155993</p> <p>* page 8, line 23 - page 9, line 2 *</p> <p>* page 16, line 1 - page 18, line 16 *</p> <p>* page 20, line 32 - page 21, last line *</p> <p>* page 28, line 1 - last line *</p> <p>* figures 1-4 *</p>	1,6,9, 12,13	
A	<p>B SUBBIAH ET AL: "User Multiplexing in RTP payload between IP Telephony Gateways"</p> <p>INTERNET ENGINEERING TASK FORCE, 21 August 1998 (1998-08-21), XP002127741</p> <p>* page 1, line 23 - page 5, last line *</p> <p>* page 12, line 1 - page 13, line 5 *</p>	7	
The present search report has been drawn up for all claims			<p>TECHNICAL FIELDS SEARCHED (Int.Cl.7)</p>
Place of search	Date of completion of the search	Examiner	
THE HAGUE	20 December 2000	Pacholec, D	
CATEGORY OF CITED DOCUMENTS		<p>T : theory or principle underlying the invention</p> <p>E : earlier patent document, but published on, or after the filing date</p> <p>D : document cited in the application</p> <p>L : document cited for other reasons</p> <p>& : member of the same patent family, corresponding document</p>	
<p>X : particularly relevant if taken alone</p> <p>Y : particularly relevant if combined with another document of the same category</p> <p>A : technological background</p> <p>O : non-written disclosure</p> <p>P : intermediate document</p>			

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Application Number
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CLAIMS INCURRING FEES

The present European patent application comprised at the time of filing more than ten claims.

- ☐ Only part of the claims have been paid within the prescribed time limit. The present European search report has been drawn up for the first ten claims and for those claims for which claims fees have been paid, namely claim(s):
-
- ☐ No claims fees have been paid within the prescribed time limit. The present European search report has been drawn up for the first ten claims.

LACK OF UNITY OF INVENTION

The Search Division considers that the present European patent application does not comply with the requirements of unity of invention and relates to several inventions or groups of inventions, namely:

see sheet B

- ☒ All further search fees have been paid within the fixed time limit. The present European search report has been drawn up for all claims.
- ☐ As all searchable claims could be searched without effort justifying an additional fee, the Search Division did not invite payment of any additional fee.
- ☐ Only part of the further search fees have been paid within the fixed time limit. The present European search report has been drawn up for those parts of the European patent application which relate to the inventions in respect of which search fees have been paid, namely claims:
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- ☐ None of the further search fees have been paid within the fixed time limit. The present European search report has been drawn up for those parts of the European patent application which relate to the invention first mentioned in the claims, namely claims:
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**LACK OF UNITY OF INVENTION
SHEET B**

Application Number
EP 98 30 8584

The Search Division considers that the present European patent application does not comply with the requirements of unity of invention and relates to several inventions or groups of inventions, namely:

1. Claims: 1 in combination with 2-5; 11

Processing of a channel request in a mobile terminal for
using Packet Radio Services.

2. Claims: 1 in combination with 6-10; 12-14

A mobile terminal for implementing a layer protocol for
speech packets.

**ANNEX TO THE EUROPEAN SEARCH REPORT
ON EUROPEAN PATENT APPLICATION NO.**

EP 98 30 8584

This annex lists the patent family members relating to the patent documents cited in the above-mentioned European search report. The members are as contained in the European Patent Office EDP file on
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20-12-2000

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For more details about this annex : see Official Journal of the European Patent Office, No. 12/82